

Claims

1. A method for controlling pectin esterase activity in a pectin containing plant starting material wherein said plant starting material is a fruit starting material before extraction of pectin from said pectin containing plant starting material comprising the steps of: obtaining a pectin containing plant starting material, contacting said pectin containing plant starting material with an acidified water having a pH of between 3.2 – 3.9 at a temperature of $\leq 70^{\circ}\text{C}$ and recovering a treated pectin containing plant starting material.
2. The method of claim 1, wherein the acidified water has a pH of between 3.4 – 3.7.
3. The method of claim 1, wherein the acidified water is acidified using an inorganic or organic acid.
4. The method of claim 1, wherein the acidified water is acidified using an inorganic acid selected from hydrochloric acid, sulfuric acid, sulfur dioxide, and nitric acid.
5. The method of claim 1, wherein the acidified water is acidified using an organic acid selected from the group consisting of citric acid, oxalic acid and acetic acid.
6. The method of claim 1, wherein the acidified water is acidified using a buffer system being capable of maintaining the pH of the acidified water within the range of between 3.2 – 3.9.
7. The method of claim 5, wherein the buffer solution is capable of maintaining the pH of the acidified water within the range of between 3.4 – 3.7.
8. The method of claim 6, wherein the buffering system is selected from the group comprising hydrochloric acid/ disodium hydrogen-citrate, glycine/hydrochloric acid,

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potassium hydrogen phthalate/ hydrochloric acid, citric acid/sodium citrate, and sodium acetate/ acetic acid.

9. The method of claim 1, wherein said pectin containing plant starting material is
5 contacted with an acidified water at a temperature of $\leq 50^{\circ}$ C.

10. The method of claim 9, wherein said pectin containing plant starting material is
contacted with an acidified water at a temperature of $\leq 30^{\circ}$ C.

10 11. The method of claims 1-10, further comprising the step of drying the treated pectin containing pectin containing plant starting material to produce a dried treated pectin containing pectin containing plant starting material.

12. The method according to claims 1-11, wherein the pectin containing plant starting
15 material is selected from the group consisting of citrus fruits and apples.

13. The method according to claims 1-12, wherein the pectin containing plant starting material comprises citrus fruits.

20 14. The method according to claim 13, wherein the pectin containing plant starting material comprises orange.

15. The method according to claim 12, wherein the pectin containing plant starting material comprises apples.

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16. A treated pectin containing plant starting material made according to claims 1-15 for use in extraction of pectin.

17. The treated pectin containing plant starting material of claim 16, wherein the
30 treated pectin containing plant starting material exhibits a pH of below 4.5 when extracted with deionized water.

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18. The treated pectin containing plant starting material of claim 17, wherein the treated pectin containing plant starting material exhibits a pH of below 4.0 when extracted with deionized water.

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19. The treated pectin containing plant starting material of claim 18, wherein the treated pectin containing plant starting material exhibits a pH of between 4.0 and 3.5 when extracted with deionized water.

10 20. The treated pectin containing plant starting material of claim 16, wherein the treated pectin containing plant starting material comprises citrus peel.

21. The treated pectin containing plant starting material of claim 20, wherein the treated pectin containing plant starting material comprises dried citrus peel.

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22. The treated pectin containing plant starting material of claim 21, wherein the treated pectin containing plant starting material comprises dried orange peel.

20 23. A treated pectin containing plant starting material made according to claims 1 – 15 for use as animal feed.

24. A treated pectin containing plant starting material made according to claims 1 – 15 for use as an ingredient in foodstuffs.

25 25. A pectin, characterized by the molecular weight of said pectin being up to 50% higher than the molecular weight of a pectin obtained from extracting a similar but non-treated pectin containing plant starting material, obtainable by extraction from a pectin containing plant starting material treated by the method according to claims 1 – 15.

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26. The pectin according to claim 25, characterized by the molecular weight of said pectin being 10 – 40% higher than the molecular weight of a pectin obtained from extracting a similar but non treated pectin containing plant starting material.

5 27. The pectin according to claim 26, characterized by the molecular weight of said pectin being 15 – 30% higher than the molecular weight of a pectin obtained from extracting a similar but non treated pectin containing plant starting material.

10 28. A pectin, characterized by a ratio between the calcium sensitivity of said pectin and the calcium sensitivity of a pectin extracted from a similar, but non-treated washed pectin containing plant starting material in the range 0.90 – 1.40, obtainable by extraction from a pectin containing plant starting material treated by the method according to claims 1 – 15.

15 29. The pectin according to claim 28, characterized by a ratio between the calcium sensitivity of said pectin and the calcium sensitivity of a pectin extracted from a similar, but non-treated pectin containing plant starting material in the range 0.90 – 1.20.

20 30. The pectin according to claim 29, characterized by a ratio between the calcium sensitivity of said pectin and the calcium sensitivity of a pectin extracted from a similar, but non-treated pectin containing plant starting material in the range 0.90 – 1.10.

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